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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,884	08/29/2001	Phillip H. Paul	22826-7002	9825

7590

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EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT PAPER NUMBER

3753

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/942,884

Applicant(s)

PAUL ET AL.

Examiner

Ramesh Krishnamurthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 - 40 is/are pending in the application.
- 4a) Of the above claim(s) 2, 3 and 14 - 38 and 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4 - 13 and 39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

This office action is responsive to communications filed 05/26/04.

**Claims 1 – 40 are pending.**

1. Applicant's election with traverse of Species A in the reply filed on 05/24/04 is acknowledged. The traversal is on the ground(s) that that a combined search and examination of all species would not impose a serious burden on the examiner. This is not found to be persuasive because it fails to evince an appreciation that the species claimed are not patentably distinct. That is, the election of species requirement was made on the basis that the claimed species are, in fact, patentably distinct, and not on the basis of how they are searched. Applicant's argument that "they could all be searched in one search" does not render the once considered patentably distinct species now not patentably distinct.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2, 3, 14 – 38 and 40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

3. **Claims 1, 4 – 13 and 39 remain for further consideration.**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 4 - 13 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes et al. (US 6,004,443) in view of Paul et al. (US 6,019,882).

Rhodes et al. discloses a mass flow controller for regulating and controlling liquid flow, the controller comprising:

A high pressure liquid source (1) having an inlet and an outlet; and a variable flow controller (19, 8) comprising a liquid flow channel (8), wherein said flow channel has an inlet and an outlet, wherein the inlet is joined to the high pressure liquid source (1) and the outlet is joined to a delivery point,

Spaced electrodes (15) disposed within said liquid flow channel and connected to a power supply (18).

Regarding the bridge recited in claim 7, it is noted that such is well known in the art (see Specification, lines 1 – 5, page 19).

The patent to Rhodes et al. discloses the claimed invention with the exception of explicitly disclosing a porous dielectric material disposed in the flow channel.

Paul et al. ('882) discloses that it is known in the art to provide a porous dielectric material within a flow channel for the purpose of providing a desired permeability within the flow channel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in Rhodes et al. a porous dielectric material disposed within a flow channel for the purpose of providing a desired permeability within the flow channel, as recognized by Paul et al. ('882).

The device according to the combination of Rhodes et al. and Paul et al. ('882) necessarily performs the method recited in claim 39.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 4 – 8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 13 of copending Application No. 10/314,707.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the variable controller recited in claim 8 (parent to claim 13)

includes a power supply thus making it a variable power supply and the outlet pressure is necessarily lower than the inlet pressure since the channel has low permeability as recited in claim 8. It is further noted that regarding claim 7, use of a bridge as recited is well known in the art. The channel recited in claim 8 of the '707 application includes channels of all cross-section including that of a circular one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 8 – 13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 13 of copending Application No. 10/314,707 in view of Paul et al. (US 6,019,882).

The device of claim 13 of the '707 application discloses the claimed invention with the exception of explicitly disclosing the material of the capillary or the size of the particles in the porous material. Paul et al. ('8820 discloses that it is known in the art to (a) use a fused silica capillary (Col. 6, line 7), (b) have a porous material comprising silica particles with a diameter between 100 nm and 5  $\mu$ m and (c) the dielectric material fabricated from the processes selected from the group consisting of lithographic patterning and etching, direct injection molding, sol-gel processing, and electroforming, for the purpose of obtaining a desired flow performance through the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the device of claim 13 of the '707 application with (a) a fused silica capillary (b) a porous material comprising silica particles with a diameter between 100 nm and 5  $\mu$ m and (c) the dielectric material fabricated from the processes selected from

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the group consisting of lithographic patterning and etching, direct injection molding, sol-gel processing, and electroforming, for the purpose of obtaining a desired flow performance through the device, as recognized by Paul et al. ('882).

This is a provisional obviousness-type double patenting rejection.

10. Claims 39 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 22 of copending Application No. 10/314,707 in view of Paul et al. (US 6,019,882).

The method of claim 22 in the '707 application discloses the method recited in claim 39 of the instant application with the exception of explicitly disclosing the channel to have a porous dielectric medium to be disposed therein. Paul et al. ('882) discloses that it is known in the art to have a porous dielectric medium to be disposed in the flow channel for the purpose of obtaining a desired flow performance through the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the method of claim 22 in the '707 application a channel to have a porous dielectric medium to be disposed therein, for the purpose of obtaining a desired flow performance through the device, as recognized by Paul et al. ('882).

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

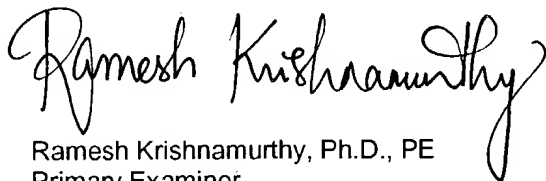
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (703) 305 - 5295. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel, can be reached on (703) 308 - 1272. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 - 9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0861.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Ramesh Krishnamurthy". The signature is fluid and cursive, with the first name "Ramesh" and last name "Krishnamurthy" clearly distinguishable.

Ramesh Krishnamurthy, Ph.D., PE  
Primary Examiner  
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